

## EAR-NUT WITH HANDLES

### Related Invention

The entire disclosures of Rissin US Patent 5,906,114 issued May 25, 1999 titled "Earring Stabilizer" and applicant's pending US patent application serial number 09/545,301 filed April 7, 2000 titled "An Improved Earring Stabilizer" are hereby incorporated by reference. It is to be understood that the improvements of the present invention could be used with the inventions disclosed therein.

### Field of the Invention

This invention pertains to a clasp, such as an ear-nut, for gripping a post of an item that is secured by a post, which passes through a body part, or clothing. The most usual use of such post-mounted items is for earrings intended for pierced ears, but such post mounting is also used for broaches or other jewelry items that are mounted by posts which pass through clothing parts (e.g. lapels). Nametags and identification badges are similarly mounted. Thus the term "Jewelry Clasp" as used herein encompasses such uses to the extent permitted by the prior art.

### Background of the Invention

Ear-carried ornaments or earrings are frequently mounted by means of a post which projects from the back of the ornament or earring for passing through a pierced ear lobe or other parts of

the ear. Withdrawal of the post is prevented by an ear-nut which is screwed onto a threaded post or slid onto a post which has an outer surface that may be smooth, notched, or ringed. Usually such a slide-on ear-nut has a base plate with a center opening and a pair of bent-out fingers which are rolled into a circular shape to be positioned so that a portion of that circular shape will frictionally engage the outer surface of a jewelry post when the post is pushed through the center opening in the base plate. When removing the jewelry or ornament the ear-nut must first be slid off the post with sufficient force to overcome the engagement friction. In order to grip the ear-nut for removal, the user will usually, perhaps inadvertently, grasp the pair of circular rolled fingers mentioned above. Therein lies the problem; these rolled fingers are difficult to grip and the tighter one squeezes them, the greater is the engagement friction to be overcome. Thus there is a long felt need for an easier way to grip an ear-nut for removal from a post of a piece of jewelry or ornament.

#### Description of the Prior Art

Various complicated devices have been proposed to find some way to form an ear-nut which can be readily loosened such as in U. S. Patent 6,058,581 to Ehrland where the ear-nut is made from a piece of resilient metal bent in a circle with overlapping ends. Each end has a keyhole – shaped opening arranged so the ends can be squeezed to line up the two circular portions of the keyholes for insertion or removal. When not squeezed, the resilience forces the two slot portions of the keyholes to grip the post and prevent removal.

The patent to Tobita (U. S. 5,669,239) discloses an ear-nut of elongated tubular shape having an inwardly projecting ridge which engages a circumferential groove in the jewelry post. The tube has a longitudinal slit to permit radial expansion so the tube can be slid on and off the post.

Artzt patent 3,040,706 teaches a structure similar to Ehrlund, with two fingers rolled up to project toward an inserted post, each finger having a U shaped wire projecting from the end thereof. The wire U shapes overlap but have a spring bias away from each other and must be squeezed together to make a circular opening for the post to pass through. When not squeezed, the two wires grip the post from opposite sides.

### Objects of the Invention

It is a principal object of this invention to provide a simple, inexpensive, and trouble-free jewelry clasp or ear-nut which can be readily gripped by a user without the necessity to align two overlapping portions or deal with an unduly long ear-nut body.

It is a further object of the invention to provide a jewelry clasp which can be readily gripped to be screwed or slid on and off a jewelry post without having any special squeezing or rotating motions. Another object of this invention is to provide a readily removable earring clasp or nut which includes an earring stabilizer to prevent a heavy earring from sagging on a wearer's ear.

### Summary of the Invention

The present invention is a jewelry clasp such as an ear-nut which has a pair of friction fingers

and may be screwed or slid onto and off a jewelry post in the usual manner, but also has two rearward projecting gripping tabs which are not connected to the friction fingers and thus gripping of the tabs does not increase the engagement friction. These gripping tabs are preferably longer and/or wider than the friction fingers so a user can readily find them, even when unseen behind an ear. Further objects and advantages will become apparent to those skilled in the art upon review of the attached drawings and specification.

#### Brief Description of the Drawings

Figure 1 is perspective view of a typical prior art jewelry clasp for post-mounted earrings or ornaments;

Figure 2 is a plan view of the present invention;

Figure 3 is a side view of the jewelry clasp shown in Figure 2;

Figure 4 is a bottom view of the jewelry claps of Figures 2 and 3;

Figure 5 is a side-view of a jewelry clasp similar to that shown in Figure 3 but with wider tabs;

Figure 6 is a perspective view of the jewelry clasp shown in Figure 5;

Figure 7 is a side view of a modification of the jewelry clasp shown in Figure 5;

Figure 8 is a plan view similar to Figure 2 but with an attached earring stabilizer;

Figure 9 is a side view similar to Figure 3 but with an attached earring stabilizer;

Figure 10 is a bottom view similar to Figure 4 but with an attached earring stabilizer; and

Figure 11 is a side view similar to Figure 5 but with an attached earring stabilizer.

#### Detailed Description

For a better understanding of the problem of removing prior art ear-nut or jewelry clasps, one only needs to review Figure 1. Fingers 12 extend from base plate 26 and frictionally engage post 14 at area 16. Frequently area 16 has a notch as shown or a plurality of circumferential rings on post 14 so as to increase the frictional engagement of fingers 12 against post 14. Frequently a user will attempt removal by gripping outer surfaces 13 and 15 of fingers 12. But such gripping only compounds the problem because the tighter one squeezes, the greater the engagement friction at area 16. It would be better for the user to grip base plate 26 such as by getting a fingernail under the base plate but in case of short finger nails or a tight base plate, this can be difficult to do.

Instead of this self-defeating gripping, the present invention provides user gripping tabs 22 as shown in Figures 2-6 (and a modification thereof in Figure 7 with tabs 32). The present invention has a base plate 26 having a pair of spring biased friction fingers 12 which are rolled in the conventional manner into two curved ends which project above opening 28 in base plate 26 so that when a jewelry post 14 is inserted through opening 28, the fingers 12 will frictionally engage post 14 in the usual manner.

However, in the present invention instead of attempting to grip fingers 12 when one seeks to remove the clasp or ear-nut, tabs 22 are used instead. Tabs 22 are not directly connected to fingers 12. As a result inward pressure on tabs 22 does not increase the friction engagement of fingers 12 and the clasp or ear-nut is made easier to remove. Preferably tabs 22 have a non-smooth outer surface such a dimple 24 as shown in Figures 2, 4, 5, and 6. The tabs 22 may be rectangular as shown in Figures 2 and 3, circular with a center dimple as shown in figures 5 and 6, or a U shaped piece of stiff wire 32 as shown in Figure 7. It should be understood that Figures 5, 6, and 7 each show two tabs 22 (or 32 in Figure 7) but only one can be seen because the other tab lies directly behind the one shown.

As shown in Figure 2 the spring fingers 12 are preferably positioned diametrically opposite each other at the twelve o'clock and six o'clock positions. The tabs 22 are preferably positioned diametrically opposite each other at the nine o'clock and three o'clock positions.

Figure 4 shows a bottom view of a jewelry clasp or ear-nut and illustrates that opening 28, which is preferably centrally located, preferably has a funnel shaped center depression 30 to facilitate threading post 14 into opening 28.

Tabs 22 (or 32 in Figure 7) preferably project away from base plate 26 a greater distance than fingers 12 and/or are also wider than fingers 12 so that it is easier to find the tabs 22 to insure their use in clasp or ear-nut removal. Their larger size also makes them easier to grip, particularly when a dimple 24 is present.

For convenience in manufacture both finger 12 and tabs 22 may be an integrate part of base plate 26, with the base plate first being flat with four projections which are subsequently bent around to form fingers 12 and tabs 22. However it is also contemplated that fingers 12 and/or tabs 22 could be later secured, as by jeweler's solder, to base plate 26 as is indeed already the case with stiff wire tabs 32 as shown in Figure 7.

Figures 8-11 are included to illustrate how the present invention may be used in combination with the invention disclosed in applicant's earlier patent 5,906,114 issued May 25, 1999 titled "Earring Stabilizer" and the further related invention disclosed in applicant's co-pending US patent application serial number 09/545,301 filed April 7, 2000 titled "An Improved Earring Stabilizer". Both of these inventions are concerned with the problem of preventing an earring, especially a large or heavy earring from hanging improperly at an angle due to sagging or bending of the ear lobe. Most earrings are visually more pleasing when hanging in a substantially vertical orientation, but some are "top heavy" and need more support. Such support, as disclosed in the above mentioned prior inventions is provided by extension bars 36 and 37 attached to an outer edge of an ear-nut, with a loop shaped stabilizer member 35 at the outer ends of the extension bars. The stabilizer member 35 preferably comprises a concave surface 38 where it is proximate to the wearer's eminentia conchae.

As described in applicant's above referenced prior inventions, such an earring stabilizer must be comfortable to the wearer and carefully secured to the earring retaining means, such as an ear-nut, to project radically outward from the periphery of the base plate. When a heavy or large

earring is worn, a tight fit of the earring is important and with an earring stabilizer such a tight fit is more important to keep the stabilizer resting properly against the back of the ear or ear lobe.

However an earring stabilizer is no substitute for the gripping tabs of the present invention since it can be even more difficult to get one's fingernail under the stabilizer than under an ear-nut base plate. Thus there is a long felt need for gripping tabs 22 in ear-nuts equipped with earring stabilizers.

In each of Figures 8-11 there is illustrated an ear-nut with an earring stabilizer 34. In plan views Figures 8 and 10 the component parts are visible including extension bars 36 and 37, which support a loop shaped stabilizing member 35. The stabilizing member 35 preferably has a concave edge 38. The extension bars 36 and 37 are secured to base plate 26 by any suitable means, such as Jeweler's solder 39 or may be formed integrally with base plate 26 as by stamping or casting as is explained in detail in applicant's above referenced prior inventions.

The earring stabilizer 34 preferably extends radially outward from the base plate 26 so as to be an extension of the back surface of the base plate as shown in Figures 9 and 11. The stabilizer may be secured to the base plate at any point on its periphery but it preferably extends outwardly from a location adjacent one of the gripping tabs 22 as illustrated in Figures 8 and 10, that is from a 3 o'clock or 9 o'clock position where the gripping fingers are at the 12 o'clock and 6 o'clock positions.